

present invention. Also, claim 9 has been amended to overcome the 102(b) rejection based on U.S. Patent No. 4,566,137 issued to Gooding.

To better present the argument against the above-described rejections and objections, Applicant believes it to be beneficial to review the features and advantages of the present invention.

The present invention relates to protective headgear, specifically football helmets. To protect a player from skull fractures and to minimize the occurrence of head and scalp lacerations, typical football helmets are comprised of a rigid shell that contains a plurality of energy-absorbing pads. More recently, helmet manufacturers have also begun to incorporate inflatable bladders or liners into the helmets which are interposed between the padding in the helmet and provide for further attenuation of the translational energy associated with the force of an impact to the helmet.

Prior art liners, however, have also presented some problems. For example, prior art liners are typically disposed toward the top portion of the helmet. As a result, when the liner is inflated, the helmet often rises up on the head and may not fit snugly around the periphery of the wearer's head. A second problem is non-uniform inflation of the liner wherein some portions of the liner may be over-inflated whereas others are under-inflated, thereby adversely affecting the fit of the helmet and the protection it provides.

The present invention is a football helmet with an inflatable liner comprised of a plurality of inflatable cells interconnected by a series of constrictions or air passageways. To allow for proper fit within the shell of the helmet, the entire rear surface of the liner is substantially flat,



thereby providing a smooth contact surface between the liner and the internal components of the helmet. The liner cooperates with energy-absorbing foam padding to provide for optimal comfort and protection.

The specific structure of the liner – multiplicity of discrete cells separated by constrictions or air passageways – permits the liner to be manufactured in a flat configuration (as opposed to being manufactured in a shape complementary to that of a wearer's head.) Thus, the liner can be manufactured using various molding techniques for forming hollow bodies. The result is that the liner of the present invention is a unitary and seamless body. And, despite its “flat” configuration, the liner can be easily flexed and manipulated to fit within the rigid shell of a helmet.

U.S. Patent No. 4,566,137 issued to Gooding describes and claims a liner for protective headgear. Indeed, Gooding teaches (1) forming a helmet shell with an internal surface; (2) forming padding; (3) attaching said padding to the internal surface of said shell; and (4) molding a flexible liner having a plurality of cells. However, Gooding does not teach that the liner is molded essentially flat as a single, unitary body. Rather, Gooding teaches that the liner is formed of a “top panel 32 with integral formed intercommunicating air channels 50” and a “bottom panel 31” that are “heat bonded together around the perimeter of the pre-formed air compartment in the area generally indicated by the numeral 55 leaving only the intercommunicating air channel 50 areas unbonded.” See column 4; lines 20-41. Moreover, the claims of the ‘137 patent each recite that the liner is comprised of “(a) a first flexible plastic sheet” and “(b) a second flexible plastic sheet fixedly attached to the first plastic sheet.” In other words, the liner is not a “unitary and

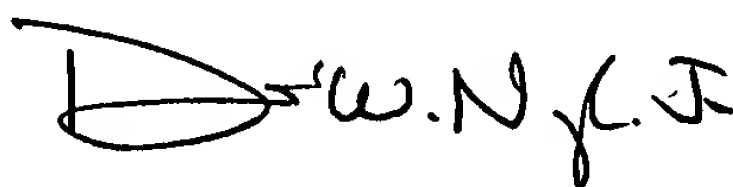
seamless" body. Manufacture of this liner requires an additional step – heat bonding the individual molded panels of the liner.

Referring now to the individual claims of the present application, claim 9 has been amended to more clearly recite that the liner is "molded as a unitary and seamless body...." The prior art neither teaches nor suggests such a unitary and seamless body. Therefore, claim 9, as amended, is neither anticipated nor rendered obvious by U.S. Patent No. 4,566,137.

Claim 10 depends from claim 9 and is believed to be allowable in light of the argument set forth above with respect to claim 9.

Therefore, Applicant respectfully requests allowance of all claims now pending in this Application.

Respectfully submitted,



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